

IN THE CLAIMS

Please amend Claims 1, 4, 6, 8, 18 and 20 as indicated.

Please add new Claims 48-53 as indicated.

Please cancel Claims 3, 5, 7, 9-12, 17, and 22-24 as indicated.

1. (Currently Amended) An electronic musculoskeletal stimulation apparatus comprising:

~~a flexible housing conformable to a portion of a body, said housing being~~ formed by one or more layers of water resistant material;

a control circuit connected ~~directly~~ to two or more electrodes, wherein said control circuit and said electrodes are substantially contained within the housing; wherein the control circuit includes a microcontroller programmed to selectively provide:

a first treatment intensity having a first duty cycle,

a second treatment intensity having a second duty cycle, and

a third treatment intensity having a third duty cycle, and

a layer of electrical insulation surrounding at least a portion of the control circuit;

~~body;~~ and

~~wherein said apparatus is attachable to said body with adhesive comprising one or more electrogel pads.~~

2. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus has an adjustable voltage intensity which ranges from approximately 90 volts to 180 volts.

3. Cancelled.

4. (Currently Amended) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said ~~low~~ first treatment intensity ~~level~~ outputs approximately 90 to 99 volts.

5. Cancelled.

6. (Currently Amended) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said ~~medium~~ second treatment intensity ~~level~~ outputs approximately 100 to 150 volts.

7. Cancelled.

8. (Currently Amended) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said ~~high~~ third treatment intensity ~~level~~ outputs approximately 155 to 180 volts.

9-12. Cancelled.

13. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus outputs a square waveform at a constant current.

14. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus uses a frequency of approximately 0.1 to 4000 hertz.

15. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus uses a frequency of approximately 7 hertz.

16. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus has a pulse-width of approximately 0.01 microseconds to 50 milliseconds.

17. Cancelled.

18. (Currently Amended) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said ~~apparatus~~ microcontroller is programmed to outputs approximately thirty pulses over a four second duration.

19. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus includes at least two buttons, whereby the first button powers said apparatus on and off and selects an intensity of said stimulation and the second button activates said stimulation.

20. (Currently Amended) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus includes at least one indicator that displays the ~~status of said apparatus~~ selected treatment intensity.

21. (Previously Presented) The electronic musculoskeletal stimulation apparatus of claim 20, wherein said apparatus includes three indicators whereby each indicator corresponds to an intensity of stimulation and displays which intensity has been selected, when said apparatus is delivering treatment, and what intensity treatment is being delivered to a patient.

22-24. Cancelled

25. (Withdrawn) A method of applying pain relieving electronic stimulation to a body using a self-contained reusable electronic musculoskeletal stimulation apparatus for the relief of minor, chronic and acute musculoskeletal aches and pains and mild muscle tension comprising the steps of: affixing said apparatus to said body with replaceable electrogel pads contained on the backside of said apparatus wherein said apparatus is affixed to said body at predetermined stimulation points; selecting an intensity of said electronic stimulation from low, medium or high intensity wherein said selection is identified by at least one indicator; activating said electronic stimulation wherein said electronic stimulation is controlled by a microprocessor that allows for multiple frequencies or pulse variations; removing said apparatus from said first stimulation point when said electronic stimulation is complete, affixing said apparatus to a second predetermined stimulation point on said body, selecting said intensity, and activating said

electronic stimulation; and repeating said process until all predetermined stimulation points have been stimulated and said pain is relieved.

26. (Withdrawn) The method of claim 25, further comprising the step of moving said portion of the body where the pain is occurring, determining if pain is still occurring, and if said pain is still occurring, affixing said apparatus directly on the location of said pain, and activating said electronic stimulation.

27. (Withdrawn) The method of claim 25, wherein said stimulation apparatus includes a control circuit connected directly to two or more electrodes wherein said control circuit and said electrodes are contained within the same housing.

28. (Withdrawn) The method of claim 25, wherein said stimulation apparatus has an adjustable voltage intensity which ranges from approximately 90 volts to 180 volts.

29. (Withdrawn) The method of claim 25, wherein said stimulation apparatus includes two buttons, whereby the first button powers said apparatus and selects an intensity of said stimulation and the second button activates said stimulation.

30. (Withdrawn) The method of claim 25, wherein said at least one indicator that displays the status of said stimulation apparatus.

31. (Withdrawn) The method of claim 30, wherein said stimulation apparatus includes three indicators whereby each indicator corresponds to said intensity of stimulation and displays which intensity has been selected, when said apparatus is delivering treatment, and what intensity treatment is being delivered to a patient.

32. (Withdrawn) The method of claim 30, wherein said indicator is a light emitting diode.

33. (Withdrawn) A method of applying pain relieving electronic stimulation to a body using a self-contained reusable electronic musculoskeletal stimulation apparatus with a preprogrammed treatment stimulation protocol comprising the steps of: applying a constant current to the electrodes wherein a voltage is adjustable between three intensities of low, medium and high at a frequency of approximately 7 hertz and a pulse-width of approximately 45 milliseconds; and applying said current with a burst of around 30 pulses within approximately a four second duration.

34. (Withdrawn) The method of claim 33, wherein said low intensity exerts approximately 90 to 99 volts.

35. (Withdrawn) The method of claim 33, wherein said body receives approximately 15 to 19.5 volts when said apparatus is attached on said body and low intensity is activated.

36. (Withdrawn) The method of claim 33, wherein said low intensity has a duty cycle in the range of 9-14%.

37. (Withdrawn) The method of claim 33, wherein said medium intensity exerts approximately 100 to 150 volts.

38. (Withdrawn) The method of claim 33, wherein said body receives approximately 19.6 to 22.9 volts when said apparatus is attached on said body and medium intensity is activated.

39. (Withdrawn) The method of claim 33, wherein said medium intensity has a duty cycle in the range of 26-31%.

40. (Withdrawn) The method of claim 33, wherein said high intensity exerts approximately 155 to 180 volts.

41. (Withdrawn) The method of claim 33, wherein said body receives approximately 23 to 27 volts when said apparatus is attached on said body and high intensity is activated.

42. (Withdrawn) The method of claim 33, wherein said high intensity has a duty cycle in the range of 47-53%.

43. (Withdrawn) A self-contained reusable electronic musculoskeletal stimulation apparatus that transmits information by a wireless signal.

44. (Withdrawn) The self-contained reusable electronic musculoskeletal stimulation apparatus of claim 43, wherein said wireless signal is transmitted by wireless modulation technique.

45. (Withdrawn) The self-contained reusable electronic musculoskeletal stimulation apparatus of claim 43, wherein said information is selected from the group consisting of: the number of times the apparatus has been used, the intensity levels used by the patient, patient information, billing information, warranty data and combinations thereof.

46. (Withdrawn) The self-contained reusable electronic musculoskeletal stimulation apparatus of claim 43, wherein said information is transmitted to a wireless data transfer device.

47. (Withdrawn) The self-contained reusable electronic musculoskeletal stimulation apparatus of claim 46, wherein a software program controls the wireless data transfer device and allows access to the information being transmitted from the apparatus and facilitates uploading the information into a computer.

48. (New) The electronic musculoskeletal stimulation apparatus of claim 1, wherein the housing is conformable to a portion of a body.



49. (New) The electronic musculoskeletal stimulation apparatus of claim 1, wherein said apparatus is attachable to said body with adhesive comprising one or more electrogel pads.

50. (New) The electronic musculoskeletal stimulation apparatus of claim 1, wherein the first duty cycle is between approximately 9% and 14%.

51. (New) The electronic musculoskeletal stimulation apparatus of claim 50, wherein the second duty cycle is between approximately 26% and 31%.

52. (New) The electronic musculoskeletal stimulation apparatus of claim 51, wherein the third duty cycle is between approximately 47% and 53%.

53. (New) The electronic musculoskeletal stimulation apparatus of claim 1, wherein the microcontroller is programmed to modulate the selected duty cycle for a first interval of approximately 45 milliseconds.

54. (New) The electronic musculoskeletal stimulation apparatus of claim 53, wherein the microcontroller is programmed to modulate the selected duty cycle for a second interval of approximately 93 milliseconds.